LAHIVE & COCKFIELD, LLP

COUNSELLORS AT LAW
28 STATE STREET
BOSTON, MASSACHUSETTS 02109

TELEPHONE (617) 227-7400
FAX (617) 742-4214
lc@lahcoc.com

JOHN A LAHIVE, JR. (1926-1997)
W. HUGO LIEPMANN
JAMES E. COCKFIELD
THOMAS V SMURZYNSKI
RALPH A LOREN
THOMAS J ENGELLENNER
GIULIO A DeCONTI, JR
ANN LAMPORT HAMMITTE
PAUL LOUIS MYERS, Ph.D
ELIZABETH A HANLEY
AMY BAKER MANDRAGOURAS
MICHAEL I FALKOFF
JOHN V BIANCO
ANTHONY A LAURENTANO
JANE E. REMILLARD
MARK A KURISKO
JEAN M SILVERI
CHARLES ERIC SCHULMAN
FAUSTINO A LICHAUCO
SCOTT D ROTHENBERGER, Ph.D.
DAVID A LANE, JR
THOMAS P. GRODT

LINDA M CHINN
JEANNE M DiGIORGIO
DEBRA J. MILASINCIC, Ph.D
LAURANNE S BUTLER

OF COUNSEL
JEREMIAH LYNCH
LAWRENCE E MONKS
WILLIAM A SCOFIELD, JR.
KEVIN J. CANNING

PATENT AGENTS
CATHERINE J KARA, Ph D.
MARK D. RUSSETT

TECHNICAL SPECIALISTS
IVANA MARAVIC-MAGOVCEVIC, Ph.D
MEGAN E WILLIAMS, Ph D
SONIA K GUTERMAN, Ph D
DIANA M. COLLAZO, Ph D
JASBIR K. SAGOO, Ph D
MARIA C. LACCOTRIPE, Ph.D.
REZA MOLLAAGHABABA, Ph.D
PHILIP A. SWAIN, Ph D

Facsimile Cover Sheet

To: Examiner Church
Company: USPTO
Location: ART UNIT: 2506
Phone: (703) 308-4861
Fax: (703) 308-5841

From: Lawrence E. Monks, Esq.
Phone: (617) 227-7400
Fax: (617) 742-4214 **(note new fax no.)**
Case No.: OLY-001C3

Date: 06/12/98
Sent By:
Pages including this cover page:

Message: **Serial No. 08/924,497**

PROPOSED CLAIMS FOR DISCUSSION IN THE INTERVIEW ON MON. 6/15 @ 1:30

46. (new) A flat cellular grid comprising two flat surfaces as an upper surface and a lower surface, said grid having at least one longitudinally extended side and a focal point and a plurality of throughgoing cells extending through said grid from one of said surfaces to the other said surface and separated by a plurality of x-ray absorbing partitions each of said partitions facing one of the said cells, and on a cross section of a side view of said grid each of the sides of said cells are formed along the hypotenuse of a right triangle formed by said hypotenuse extending from the intersection of said side of said cell with said lower surface to said focal point and by a perpendicular from said focal point to said lower surface of said grid and also by said lower surface of said grid between said intersection of said side of said cell and intersection with said perpendicular from said focal point, said sides of said cells having different lengths from said upper surface to said lower surface for each said side of each said cell and said length for each of said sides of each said cell is proportional to said hypotenuse corresponding to each said side, said cells in a view of one of said surfaces further having sides and diagonals that are neither perpendicular nor parallel to said longitudinally extended side.

47. A cellular x-ray grid as defined in claim 46, further comprising a frame surrounding said sides of said grid.

48. A cellular X-ray grid as defined in claim 47, wherein said frame has a height and width sufficient to prevent bending of the grid.

49. A cellular X-ray grid as defined in claim 46; and further comprising a layer of an X-ray absorbing material covering all surfaces of said partitions.

50. A cellular X-ray grid as defined in claim 46, wherein said grid further comprising protective plates covering said upper and lower surfaces and composed of an X-ray transmitting material which allows passage of long wave component of an exposing radiation.

51. A cellular X-ray grid as defined in claim 50, wherein said plates are connected with said upper and lower surfaces of said grid.

52. A cellular X-ray grid as defined in claim 46, wherein said cells having axes extending perpendicular to said upper and lower surfaces of said grid.

53. A cellular X-ray grid as defined in claim 46, wherein said cells are filled with gas.

54. A cellular X-ray grid as defined in claim 46, wherein said cells are vacuumed.

55. (new) A flat cellular grid comprising two flat surfaces as an upper surface and a lower surface, said grid having at least one longitudinally extended side and a focal point and a plurality of throughgoing cells extending through said grid from one of said surfaces to the other said surface and separated by a plurality of x-ray absorbing partitions each of said partitions facing one of the said cells, and on a cross section of side view of said grid each of the sides of said cells are formed along the hypotenuse of a right triangle formed by said hypotenuse extending from the intersection of said side of said cell with said lower surface to said focal point and by a perpendicular from said focal point to said lower surface of said grid and also by said lower surface of said grid between said intersection of said side of said cell and intersection with said perpendicular from said focal point, said sides of said cells having different lengths from said upper surface to said lower surface for each said side of each said cell and said length for each said side of each said cell is proportional to said hypotenuse corresponding to each said side, said cells in a view of one of said surfaces further having sides and diagonals that are neither perpendicular nor parallel to the direction of movement of said grid during exposure by x-rays through said grid, when said longitudinal extended side is substantially parallel to said direction of said movement of said grid, and the angles that each said side of each said cell of said grid makes with the said direction of said movement of said grid provides a complete erasing of an image of the cells on an x-ray image during said movement of said grid during an x-ray procedure.

56. (new) A cellular X-ray grid as defined in Claim 55, wherein said cells on a view from at least one of said opposing surfaces having two opposite sides each inclined relative to direction of movement at one of the following Mattsson angles:

$\tan \alpha_1 = 1/31 + 3i$
$\tan \alpha_2 = 1/21 + 2i;$
$\tan \alpha_3 = 1/1 + i;$
$\tan \alpha_4 = 21 + i/1 + i;$
$\tan \alpha_5 = 31 + 2i/1 + i;$
$\tan \alpha_6 = 21 + i/21 + 2i;$
$\tan \alpha_7 = 1 + i/31 + 2i;$

$\tan \alpha_8 = 1 + i/21 + i;$

$\tan \alpha_9 = 1 + i/1;$

$\tan \alpha_{10} = 21 + 2i/1;$

$\tan \alpha_{11} = 31 + 3i/1$

$\tan \alpha_{12} = 21 + 2i/21 + i$

wherein 1 is a thickness of each of said partitions in a direction perpendicular to sides of said partitions of two neighboring cells, and i is a length of said side of each of said cells; and $\alpha_1 - \alpha_{12}$ is an angle of inclination of said sides of cells to the intended direction of movement which is substantially parallel to said longitudinally extended side of said grid.

57. (new) A cellular X-ray grid comprising a main part having two opposite end surfaces consisting of an upper surface and a lower surface and provided with a plurality of X-ray transmissive cells filled with gas or vacuum, said cells extending through said main part from one of said end surfaces to another of said end surfaceand separated by a plurality of X-ray absorbing partitions each having side surfaces facing a respective one of said cells.

58. (new) A cellular X-ray grid comprising a main part having two opposite end surfaces consisting of an upper surface and a lower surface and provided with a plurality of X-ray transmissive cells filled with gas or vacuum, said cells extending through said main part from one of said end surfaces to the other said end surface and separated by a plurality of x-ray absorbing partitions each having side surfaces facing a respective one of said cells and a X-ray absorbing layer completely covering all surfaces of said partitions.

59. (new) A cellular X-ray grid comprising a main part having two opposite end surfaces, an upper surface and a lower surface, and provided with a plurality of X-ray transmissive cells filled with gas or vacuum, said cells extending through said main part from one of said end surfaces to another of said end surfaces and separated by a plurality of X-ray absorbing partitions each having side surfaces facing a respective one of said cells, said grid has at least one longitudinally-extended side, said cells on a view from one of said end surfaces having diagonals disposed at such a predetermined angle not parallel or perpendicular to said longitudinally-extending side of said main part so as to eliminate shadow images of said cells on an x-ray image after passing through said grid during exposure thereof by x-ray radiation with movement of said grid in a predetermined

direction, with said longitudinally-extending side of said main part on a view from one of said end surfaces being oriented substantially parallel to said direction of said movement.

60. (new) A cellular X-ray grid comprising a main part having two opposite end surfaces, an upper surface and a lower surface and provided with a plurality of X-ray transmissive cells filled with gas or vacuum, said cells extending through said main part from one of said end surfaces to the other said end surface and separated by a plurality of X-ray absorbing partitions each having side surfaces facing a respective one of said cells, an x-ray absorbing layer completely covering all surfaces of said partitions, said grid having at least one longitudinally-extended side, said cells on a view from one of said end surfaces having diagonals disposed at such a predetermined angle not parallel or perpendicular to said longitudinally-extending side of said main part so as to eliminate shadow images of said cells on an x-ray image after passing through the grid during exposure thereof from x-ray radiation with movement of said grid in a predetermined direction, with said longitudinally-extending side of said main part on a view from one of said end surfaces being oriented substantially parallel to said direction of said movement.